

IN THE CLAIMS:

1. (Currently Amended) An optical device comprising:  
a plurality of separate optical paths, each of which  
receiving a separate group of optical signals;  
a plurality of variable optical attenuators, each of which  
having an input coupled to an associated one of said separate  
optical paths;  
an optical combiner having separate inputs, each of which  
coupled to an output of an associated one of said variable optical  
attenuators, said optical combiner having an output providing said  
separate groups of optical signals in an aggregated form on an  
aggregate optical signal path; and  
an optical performance monitor circuit coupled to said  
aggregate optical signal path, said optical performance monitor  
circuit being configured to detect an a plurality of optical  
signal power of at least powers, each of which being associated  
with a respective one of said separate groups and to supply a  
feedback signal to corresponding ones of said variable optical  
attenuators for adjusting a respective attenuation associated with  
each of said attenuators in response to said detected plurality of  
optical signal powers.
2. (Original) An optical device according to claim 1,  
wherein said device further comprises a plurality of first optical  
combiners, each of which being coupled to an associated one of  
said optical paths for supplying a respective one of said separate  
groups of optical signals.

BEST AVAILABLE COPY

3. (Original) An optical device according to claim 1, wherein said device further comprises an optical demultiplexer, said optical demultiplexer having a plurality of outputs, each of which being coupled to an associated one of said optical paths for supplying a respective one of said separate groups of optical signals.

4. (Original) An optical device according to claim 1, wherein said device further comprises an optical amplifier coupled to an output of said optical combiner.

5. (Original) An optical device according to claim 1, wherein said device further comprises a filter coupled to said aggregate optical signal path, said filter having an output coupled to an input of said optical performance monitor.

6. (Original) An optical device according to claim 1, wherein said combiner comprises a plurality of cascaded optical filters, each of said optical filters having an input coupled to an output of an associated one of said variable optical attenuators.

7. (Currently Amended) An optical device according to claim 1, wherein said optical performance monitor circuit comprises an optical spectrum analyzer for detecting said plurality of optical

signal powers and a processor circuit for supplying said feedback signals.

8. (Currently Amended) An optical device comprising:  
an optical communication path receiving an optical signal including a plurality of separate wavelengths;  
an optical performance monitor circuit coupled to said optical communication path, said optical performance monitor circuit being configured to detect ~~an optical signal power a~~ plurality of optical signal powers, each of which being associated with ~~each a respective one~~ of a plurality of separate groups of said separate wavelengths and to supply separate feedback signals in response to said detected plurality of optical signal powers;  
an optical demultiplexer configured to receive an output of said optical performance monitor circuit, said demultiplexer supplying each of said plurality of groups of said separate wavelengths on a separate associated output; and  
a plurality of variable optical attenuators, each of which receiving a separate one of said separate associated outputs, each of said plurality of optical attenuators receiving an associated one of said separate feedback signals for adjusting an associated attenuation level.

9. (Original) An optical device according to claim 8, wherein said device further comprises an optical amplifier coupled to said optical communication path.

BEST AVAILABLE COPY

10. (Original) An optical device according to claim 8, wherein said device further comprises a filter coupled to said optical communication path, said filter having an output coupled to an input of said optical performance monitor.

11. (Original) An optical device according to claim 8, wherein said optical performance monitor circuit comprises an optical spectrum analyzer for detecting said optical signal powers and a processor circuit for supplying said feedback signals.

12. (Original) A method for transmitting optical signals, comprising the steps of:

providing each of a plurality groups of said optical signals on a respective one of a plurality of separate optical signal paths;

combining each of said groups of optical signals on an aggregate optical signal path;

detecting a plurality of power levels, each of said plurality of power levels being associated with a corresponding one of said plurality of groups of optical signals; and

attenuating each group of said plurality of optical signals on said separate optical signal paths in response to a corresponding one of said detected plurality of power levels.

13. (Original) A method for transmitting optical signals, comprising the steps of:

providing each of a plurality of groups of said optical

**BEST AVAILABLE COPY**

signals in an aggregated form on an optical signal path,

detecting a plurality of power levels, each of said plurality of power levels being associated with a corresponding one of said plurality of groups of optical signals; separating said groups of optical signals onto associated separate optical signal paths; and

attenuating each group of said plurality of optical signals on said separate optical signal paths in response to a corresponding one of said detected plurality of power levels.

---